REMARKS

Claims 1-27 are pending in the subject application. Of those claims, claims 14-27 are withdrawn as a result of a restriction requirement. Claims 1-13 are rejected under 35 U.S.C. § 103(a) as being obvious over EP 1 123 987 to Rosenzweig et al. (Rosenzweig et al.). Claims 1-3 and 10 are rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent 6,305,077 to Conner et al. (Conner et al.). Similarly, claims 6, 8, 9 and 11-13 are rejected under 35 U.S.C. § 103(a) as being obvious over Conner et al.

The foregoing rejections are respectfully disagreed with, and are traversed below.

Rosenzweig et al. disclose an aluminide coating system, which first requires the deposition of a layer of elemental metal over the cleaned substrate, the deposited metal being matched to the composition of the substrate. The elemental metal, such as Ni or Co, serves as a new surface into which aluminum is subsequently deposited and a protective coating grown ([paragraph 0015]). The new protective aluminide coating is facilitated by minimizing the amount of metal diffusing from the base material to interact with aluminum to form the new aluminide coating ([0009]). It is the elemental metal layer that combines with the aluminum applied during an aluminiding treatment to form the protective aluminide coating ([0009]).

Rosenzweig et al. do not disclose a method for repairing a coated component, as in Applicant's independent claims 1 and 7, wherein a lower growth environmental bond coating is applied directly to the remaining base metal substrate of the component. In contrast, Rosenzweig et al. teach away from such an application because Rosenzweig et al. require the application of an elemental metal layer directly on its base metal substrate to prevent any interaction between the base metal substrate and a subsequently applied coating.

Thus, Rosenzweig et al. also do not disclose or suggest Applicant's method as set forth in independent claim 1, wherein a lower growth environmental bond coating and remaining metal substrate of the component interact to form a diffusion zone. Rosenzweig et al.'s system is specifically designed to prevent such interaction by use of an intermediary layer of elemental metal between the base metal substrate and subsequently applied coating.

Similarly, Conner et al. do not disclose nor suggest the subject claims. Conner et al. disclose the repair of coated turbine components wherein after service a ceramic thermal barrier coating is removed. Thereafter, oxidation and corrosion products are removed from an underlying metallic bond coat. Then, a noble metal is applied, preferably by plating, and the noble metal is diffused by thermal diffusion, followed by aluminiding (Col. 1-2).

Conner et al. do not disclose removing a metallic bond coat, as in Applicant's independent claims 1 and 7. Conner et al. merely disclose removing oxidation and corrosion products from the metallic bond coat. Thus, Conner et al. also do not disclose removing a portion of a base metal substrate between about 1-3 mils. The Examiner states at page 6 that "one could reasonably expect that the reduction in substrate thickness would be similar to that claimed by Applicant." Applicant respectfully disagrees because the removal of oxidation and corrosion products from a metallic bond coat as required by Conner et al. 1) does not disclose or suggest the entire removal of the metallic bond coat and 2) thus does not disclose or suggest that any underlying base metal substrate would be removed during the process.

It appears that Conner et al. teach the cleaning of its metallic bond coat to rid it of oxidation and corrosion products, and then a noble metal is applied thereon. The noble metal is then diffused and aluminided to provide an outermost noble metal-Al layer.

Thus, it is respectfully asserted that Conner et al. do not disclose or suggest Applicant's step b) of independent claim 1 requiring removing a bond coat, wherein a portion of the base metal substrate between about 1-3 mils in thickness also is removed to create a remaining base metal substrate of reduced thickness.

Conner et al. also do not teach applying a lower growth environmental bond coating directly to the remaining base metal substrate after removal of the bond coat, as in Applicant's step c) of independent claims 1 and 7. In contrast, Conner et al. teach applying a noble metal to a metallic bond coat which has been cleaned to remove oxidation and corrosion from the bond coat. Thus, Conner et al. would not disclose or suggest Applicant's method as in claim 1 requiring the removal of bond coat and portion of base metal substrate followed by

application of a lower growth environmental bond coating directly to the remaining base metal, wherein the remaining base metal substrate interact to form a diffusion zone.

The Examiner also states in the Office Action at page 6 that one of ordinary skill in the art would have recognized that minimizing the reduction of substrate thickness in future repair cycles would have been desirable. It is respectfully pointed out that Conner et al. do not disclose or suggest any method to accomplish this as set forth by Applicant.

Conner et al. are concerned with providing a protective coating buildup which exceeds the life requirements for the next engine build. More particularly, the life of the coating under service conditions is greater than the service time until the next scheduled maintenance (Col. 2). In contrast, Applicant's process enables further multiple repairs of components, which may not otherwise have been possible because of reduced wall thickness (See specification, page 18).

Conner et al. even distinguish their process from "prior processes involving removal, re-application of the bond coat and/or ceramic thermal barrier coating." (Col. 2, lines 49-60).

It is further noted that claim 7 has been rewritten in independent form to include features specified above, as well as incorporate the features of claims 1 and 6. In the Office Action, the Examiner recognized that Conner et al. do not disclose or suggest the features of claim 7.

For the foregoing reasons, independent claims 1 and 7 are believed to be patentable. Accordingly, claims 2-6 and 7-13 depending from an independent claim are also believed to be in condition for allowance.

All issues having been addressed, the subject application is believed to be in condition for immediate allowance. Accordingly, such favorable action is earnestly solicited.

Should the Examiner believe that a discussion would advance the prosecution of the subject application, the Examiner is invited to contact the undersigned at the telephone number listed below.

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. BOX 1450, Alexandria, VA 22313-1450.

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